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NEUROLOGICAL PROBLEMS IN CHILDREN WITH BRAIN DAMAGE SYNDROME

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In 1969 the cerebral distress syndrome was described to be present also in full-term babies. It included deviation in the muscular tone and the primitive reflexes, signs of increased intracranial pressure and oedema of the brain. Those are the most frequent results of toxæmia, placental lesions, post-maturity and nephropathia gravidarum as well as results from parturition leading to perinatal asphyxia. The syndrome has three degrees according to its gravity and in part of the cases it may lead to death or to the permanent neurological damages.

The purpose of the present study is to establish the clinical manifestation of the syndrome and to determine the frequency of the permanent neurological disturbances in the affected children in following their psychomotor development.

We studied 31 children with cerebral distress syndrome, all born in 1990 and in the beginning of 1991. They were treated in the Neonatologic Intensive Care Department, Medical University, Varna. Later on 7 of them were hospitalized in the Department of Pediatrics. The psychomotor development of the remaining 24 children was followed-up by the children's neurological consulting room by the method of Tomova-Manova. The distribution in both sexes shows: boys - 22, girls - 9. From the first pregnancy are 18 children, from the second or next one - 13. About 1/3 of the pregnancies were pathological, as in 4 cases there were diseases during the pregnancies (influenza, unclear febrile conditions, diabetes), in other 7 cases - pathology connected with pregnancy (imminent abortion, EPH gestoses). In 64,5% the pregnancy was normal.

Perinatal disturbances were: sacral position - 5 (16,1%), forceps - 3 (9,7%), non-planned Cesarean operation - 4 (12,9%), tortuous umbilical cord - 1 (3,2%). In the remaining 18 cases (58,1%) aspiration, artificial respiration and oxygen were used. APGAR on the 5th min showed the following values: from 0 to 3 - 2 children; from 4 to 6 - 12, and from 7 to 8 - 17. The clinical characteristics of the newborns with cerebral distress syndrome are: muscular hypotone - 28 (90,3%), anomalies in the primitive reflexes - 24 (77,4%), convulsions - 14 (45,7%).

A total of 24 from all 31 children were discharged from hospital for further looking after at home. Their neuro-psychic development, followed-up for a one-year period, did not show deviations from normal children. 22,6% were with permanent neurological damages which were established by means of clinical examination, transcranial echoencephalography, computer tomography and EEG during their hospitalisation. The characteristics: microcephals with convulsions - 3 children; hydrocephal - 1 child; porencephal with convulsions - 1 child; cerebral palsy - quadriparesis with convulsions - 2 children. All of them had pre- and perinatal damages.

Our study included not great but sufficient number of children which could be related to the average annual number of newborns in Varna during the last 2 years and it gave a frequency of the cerebral distress syndrome about 8/1000. This approximates the data of Volpe whose study gives a frequency from 2 to 7/1000. We think that the scheme for evaluation of the degree of depressive conditions according to APGAR, in spite of some imperfections, is a reliable index with a prognostic significance for our conditions. A total of 24 children (77,4%) were discharged to be looked after at home and they did not show psychomotor disturbances for an one-year period.

According to Bossi, 90% of these newborns get a normalization of the symptoms. We direct our attention towards children with convulsions as a part of syndrome and normal psychomotor development towards the age of 1 year - 7 children (28%). According to Mielke R. et al. up to 30% of the children with convulsions in the neonatal period can repeat them later. This puts a requirement for a more systematic clinical and EEG-control of the observed children.

We conclude that:

1. The frequency of cerebral distress syndrome for the Varna region is about 8/1000 newborns.
2. More than 2/3 of the children with the syndrome of brain damage are boys.
3. Only 1/3 of the children are from pathological pregnancies and 41,9% are with perinatal disturbances.
4. The main clinical symptoms of the cerebral distress syndrome are muscular hypotone and anomalies in the primitive reflexes.
5. Only 22,6% of our cases have permanent neurological damages.